

SEQUENCE LISTING

<110> Harras, Marie
Donoho, Gregory
Turner, C. Alexander Jr.
Nehls, Michael
Friedrich, Glenn
Zambrowicz, Brian
Sands, Arthur T.

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Polynucleotides Encoding the Same

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Gly	Asn	Thr	Gly	Ser	Gly	Lys	Ser	Ser	Leu	Leu	Ser	Ala	Ile	Leu	Glu
						225			230					235	

Glu Met His Leu Leu Glu Gly Ser Val Gly Val Gln Gly Ser Leu Ala
 245 250 255
 Tyr Val Pro Gln Gln Ala Trp Ile Val Ser Gly Asn Ile Arg Glu Asn
 260 265 270
 Ile Leu Met Gly Gly Ala Tyr Asp Lys Ala Arg Tyr Leu Gln Val Leu
 275 280 285
 His Cys Cys Ser Leu Asn Arg Asp Leu Glu Leu Leu Pro Phe Gly Asp
 290 295 300
 Met Thr Glu Ile Gly Glu Arg Gly Leu Asn Leu Ser Gly Gly Gln Lys
 305 310 315 320
 Gln Arg Ile Ser Leu Ala Arg Ala Val Tyr Ser Asp Arg Gln Ile Tyr
 325 330 335
 Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ala His Val Gly Lys His
 340 345 350
 Ile Phe Glu Glu Cys Ile Lys Lys Thr Leu Arg Gly Lys Thr Val Val
 355 360 365
 Leu Val Thr His Gln Leu Gln Tyr Leu Glu Phe Cys Gly Gln Ile Ile
 370 375 380
 Leu Leu Glu Asn Gly Lys Ile Cys Glu Asn Gly Thr His Ser Glu Leu
 385 390 395 400
 Met Gln Lys Lys Gly Lys Tyr Ala Gln Leu Ile Gln Lys Met His Lys
 405 410 415
 Glu Ala Thr Ser Asp Met Leu Gln Asp Thr Ala Lys Ile Ala Glu Lys
 420 425 430
 Pro Lys Val Glu Ser Gln Ala Leu Ala Thr Ser Leu Glu Glu Ser Leu
 435 440 445
 Asn Gly Asn Ala Val Pro Glu His Gln Leu Thr Gln Glu Glu Glu Met
 450 455 460
 Glu Glu Gly Ser Leu Ser Trp Arg Val Tyr His Tyr Ile Gln Ala
 465 470 475 480
 Ala Gly Gly Tyr Met Val Ser Cys Ile Ile Phe Phe Phe Val Val Leu
 485 490 495
 Ile Val Phe Leu Thr Ile Phe Ser Phe Trp Trp Leu Ser Tyr Trp Leu
 500 505 510
 Glu Gln Gly Ser Gly Thr Asn Ser Ser Arg Glu Ser Asn Gly Thr Met
 515 520 525
 Ala Asp Leu Gly Asn Ile Ala Asp Asn Pro Gln Leu Ser Phe Tyr Gln
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 Leu Val Tyr Gly Leu Asn Ala Leu Leu Ile Cys Val Gly Val Cys
 545 550 555 560
 Ser Ser Gly Ile Phe Thr Lys Val Thr Arg Lys Ala Ser Thr Ala Leu
 565 570 575
 His Asn Lys Leu Phe Asn Lys Val Phe Arg Cys Pro Met Ser Phe Phe
 580 585 590
 Asp Thr Ile Pro Ile Gly Arg Leu Leu Asn Cys Phe Ala Gly Asp Leu
 595 600 605
 Glu Gln Leu Asp Gln Leu Leu Pro Ile Phe Ser Glu Gln Phe Leu Val
 610 615 620
 Leu Ser Leu Met Val Ile Ala Val Leu Leu Ile Val Ser Val Leu Ser
 625 630 635 640
 Pro Tyr Ile Leu Leu Met Gly Ala Ile Ile Met Val Ile Cys Phe Ile
 645 650 655
 Tyr Tyr Met Met Phe Lys Lys Ala Ile Gly Val Phe Lys Arg Leu Glu
 660 665 670
 Asn Tyr Ser Arg Ser Pro Leu Phe Ser His Ile Leu Asn Ser Leu Gln
 675 680 685

Gly Leu Ser Ser Ile His Val Tyr Gly Lys Thr Glu Asp Phe Ile Ser
 690 695 700
 Gln Phe Lys Arg Leu Thr Asp Ala Gln Asn Asn Tyr Leu Leu Leu Phe
 705 710 715 720
 Leu Ser Ser Thr Arg Trp Met Ala Leu Arg Leu Glu Ile Met Thr Asn
 725 730 735
 Leu Val Thr Leu Ala Val Ala Leu Phe Val Ala Phe Gly Ile Ser Ser
 740 745 750
 Thr Pro Tyr Ser Phe Lys Val Met Ala Val Asn Ile Val Leu Gln Leu
 755 760 765
 Ala Ser Ser Phe Gln Ala Thr Ala Arg Ile Gly Leu Glu Thr Glu Ala
 770 775 780
 Gln Phe Thr Ala Val Glu Arg Ile Leu Gln Tyr Met Lys Met Cys Val
 785 790 795 800
 Ser Glu Ala Pro Leu His Met Glu Gly Thr Ser Cys Pro Gln Gly Trp
 805 810 815
 Pro Gln His Gly Glu Ile Ile Phe Gln Asp Tyr His Met Lys Tyr Arg
 820 825 830
 Asp Asn Thr Pro Thr Val Leu His Gly Ile Asn Leu Thr Ile Arg Gly
 835 840 845
 His Glu Val Val Gly Ile Val Gly Arg Thr Gly Ser Gly Lys Ser Ser
 850 855 860
 Leu Gly Met Ala Leu Phe Arg Leu Val Glu Pro Met Ala Gly Arg Ile
 865 870 875 880
 Leu Ile Asp Gly Val Asp Ile Cys Ser Ile Gly Leu Glu Asp Leu Arg
 885 890 895
 Ser Lys Leu Ser Val Ile Pro Gln Asp Pro Val Leu Leu Ser Gly Thr
 900 905 910
 Ile Arg Phe Asn Leu Asp Pro Phe Asp Arg His Thr Asp Gln Gln Ile
 915 920 925
 Trp Asp Ala Leu Glu Arg Thr Phe Leu Thr Lys Ala Ile Ser Lys Phe
 930 935 940
 Pro Lys Lys Leu His Thr Asp Val Val Glu Asn Gly Gly Asn Phe Ser
 945 950 955 960
 Val Gly Glu Arg Gln Leu Leu Cys Ile Ala Arg Ala Val Leu Arg Asn
 965 970 975
 Ser Lys Ile Ile Leu Ile Asp Glu Ala Thr Ala Ser Ile Asp Met Glu
 980 985 990
 Thr Asp Thr Leu Ile Gln Arg Thr Ile Arg Glu Ala Phe Gln Gly Cys
 995 1000 1005
 Thr Val Leu Val Ile Ala His Arg Val Thr Thr Val Leu Asn Cys Asp
 1010 1015 1020
 His Ile Leu Val Met Gly Asn Gly Lys Val Val Glu Phe Asp Arg Pro
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 Glu Val Leu Arg Lys Lys Pro Gly Ser Leu Phe Ala Ala Leu Met Ala
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 Thr Ala Thr Ser Ser Leu Arg
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 <212> DNA
 <213> homo sapiens

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gggcttgtcc	agagcctgac	aagtataacc	ttgttcatca	tccccacagt	ggccacagcg	240
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ggtctcacga	attccaagtc	tgcaagtatg	aggttcaaga	agtttttccct	ccaggagagc	420
cctgtttct	atgtccagac	attacaagac	cccagcaag	ctctggctt	tgaggaggcc	480
accttgc当地	ggcaacagac	ctgtcccccgg	atcgtcaatg	gggcactgga	gctggagagg	540
aacgggc当地	cttctgaggg	gatgaccagg	cctagagatg	ccctcgggccc	agaggaagaa	600
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<211> 496
<212> PRT
<213> homo sapiens

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									20				25			30			
Ile	Lys	Met	Tyr	Thr	Trp	Glu	Lys	Pro	Phe	Ala	Lys	Ile	Ile	Glu	Asp				
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Leu	Arg	Arg	Lys	Glu	Arg	Lys	Leu	Leu	Glu	Lys	Cys	Gly	Leu	Val	Gln				
									50				55			60			
Ser	Leu	Thr	Ser	Ile	Thr	Leu	Phe	Ile	Ile	Pro	Thr	Val	Ala	Thr	Ala				
									65				70			75			80
Val	Trp	Val	Leu	Ile	His	Thr	Ser	Leu	Lys	Leu	Lys	Leu	Thr	Ala	Ser				
									85				90			95			
Met	Ala	Phe	Ser	Met	Leu	Ala	Ser	Leu	Asn	Leu	Leu	Arg	Leu	Ser	Val				
									100				105			110			
Phe	Phe	Val	Pro	Ile	Ala	Val	Lys	Gly	Leu	Thr	Asn	Ser	Lys	Ser	Ala				
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Val	Met	Arg	Phe	Lys	Lys	Phe	Phe	Leu	Gln	Glu	Ser	Pro	Val	Phe	Tyr				
									130				135			140			
Val	Gln	Thr	Leu	Gln	Asp	Pro	Ser	Lys	Ala	Leu	Val	Phe	Glu	Glu	Ala				
									145				150			155			160
Thr	Leu	Ser	Trp	Gln	Gln	Thr	Cys	Pro	Gly	Ile	Val	Asn	Gly	Ala	Leu				
									165				170			175			
Glu	Leu	Glu	Arg	Asn	Gly	His	Ala	Ser	Glu	Gly	Met	Thr	Arg	Pro	Arg				
									180				185			190			
Asp	Ala	Leu	Gly	Pro	Glu	Glu	Gly	Asn	Ser	Leu	Gly	Pro	Glu	Glu	Leu				

195	200	205
His Lys Ile Asn Leu Val Val Ser Lys Gly Met Met	Leu Gly Val Cys	
210	215	220
Gly Asn Thr Gly Ser Gly Lys Ser Ser Leu Leu	Ser Ala Ile Leu Glu	
225	230	235
Glu Met His Leu Leu Glu Gly Ser Val Gly Val Gln	Gly Ser Leu Ala	240
245	250	255
Tyr Val Pro Gln Gln Ala Trp Ile Val Ser Gly Asn	Ile Arg Glu Asn	
260	265	270
Ile Leu Met Gly Gly Ala Tyr Asp Lys Ala Arg	Tyr Leu Gln Val Leu	
275	280	285
His Cys Cys Ser Leu Asn Arg Asp Leu Glu Leu	Leu Pro Phe Gly Asp	
290	295	300
Met Thr Glu Ile Gly Glu Arg Gly Leu Asn Leu	Ser Gly Gly Gln Lys	
305	310	315
Gln Arg Ile Ser Leu Ala Arg Ala Val Tyr Ser Asp	Arg Gln Ile Tyr	320
325	330	335
Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ala His	Val Gly Lys His	
340	345	350
Ile Phe Glu Glu Cys Ile Lys Lys Thr Leu Arg	Gly Lys Thr Val Val	
355	360	365
Leu Val Thr His Gln Leu Gln Tyr Leu Glu Phe	Cys Gly Gln Ile Ile	
370	375	380
Leu Leu Glu Asn Gly Lys Ile Cys Glu Asn Gly	Thr His Ser Glu Leu	
385	390	395
Met Gln Lys Lys Gly Lys Tyr Ala Gln Leu Ile	Gln Lys Met His Lys	
405	410	415
Glu Ala Thr Ser Val Phe Arg Cys Pro Met Ser	Phe Asp Thr Ile	
420	425	430
Pro Ile Gly Arg Leu Leu Asn Cys Phe Ala Gly	Asp Leu Glu Gln Leu	
435	440	445
Asp Gln Leu Leu Pro Ile Phe Ser Glu Gln Phe	Leu Val Leu Ser Leu	
450	455	460
Met Val Ile Ala Val Leu Leu Ile Val Ser Val	Leu Ser Pro Tyr Ile	
465	470	475
Leu Leu Met Gly Ala Ile Ile Met Val Ile Cys	Phe Ile Tyr Tyr Met	
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<210> 9
 <211> 1626
 <212> DNA
 <213> homo sapiens

<400> 9

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ccatttgcaa aaatcattga agacctaaga aggaaggaaa ggaagctatt ggagaagtgc	180
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gtctgggttc tcattcacac atccttaaag ctgaaaactca cagcgtcaat ggcttcagc	300
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ggtctcacga attccaagtc tgcaagtatc aggttcaaga agttttcct ccaggagagc	420
cctgtttct atgtccagac attacaagac cccagcaag ctctggtctt tgaggaggcc	480
accttgcata ggcaacagac ctgtccggg atcgtcaatg gggcactgga gctggagagg	540
aacgggcata cttctgaggg gatgaccagg ccttagagatg ccctcgggcc agaggaagaa	600
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acactcaggg	ggaagacggt	cgtcctggtg	accaccagc	tgcagtactt	agaattttgt	1140
ggccagatca	tttttgttga	aatatggaaa	atctgtgaaa	atggaactca	cagtgagttt	1200
atgcagaaaaa	aggggaaata	tgcccaactt	atccagaaga	tgcacaagga	agccacttcg	1260
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gtcctgtcct	taatggtgat	cgccgtcctg	ttgattgtca	gtgtgctgtc	tccatatata	1440
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gccatcggtg	tgttcaagag	actggagaac	tatagccgtt	ctcctttatt	ctccccatc	1560
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<211> 542
<212> PRT
<213> homo sapiens

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Asp Gln Arg Ile Arg Val Thr Ser Glu Val Leu Thr Cys Ile Lys Leu
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Ile Lys Met Tyr Thr Trp Glu Lys Pro Phe Ala Lys Ile Ile Glu Asp
35 40 45
Leu Arg Arg Lys Glu Arg Lys Leu Leu Glu Lys Cys Gly Leu Val Gln
50 55 60
Ser Leu Thr Ser Ile Thr Leu Phe Ile Ile Pro Thr Val Ala Thr Ala
65 70 75 80
Val Trp Val Leu Ile His Thr Ser Leu Lys Leu Lys Leu Thr Ala Ser
85 90 95
Met Ala Phe Ser Met Leu Ala Ser Leu Asn Leu Leu Arg Leu Ser Val
100 105 110
Phe Phe Val Pro Ile Ala Val Lys Gly Leu Thr Asn Ser Lys Ser Ala
115 120 125
Val Met Arg Phe Lys Lys Phe Phe Leu Gln Glu Ser Pro Val Phe Tyr
130 135 140
Val Gln Thr Leu Gln Asp Pro Ser Lys Ala Leu Val Phe Glu Glu Ala
145 150 155 160
Thr Leu Ser Trp Gln Gln Thr Cys Pro Gly Ile Val Asn Gly Ala Leu
165 170 175
Glu Leu Glu Arg Asn Gly His Ala Ser Glu Gly Met Thr Arg Pro Arg
180 185 190
Asp Ala Leu Gly Pro Glu Glu Gly Asn Ser Leu Gly Pro Glu Leu
195 200 205
His Lys Ile Asn Leu Val Val Ser Lys Gly Met Met Leu Gly Val Cys
210 215 220
Gly Asn Thr Gly Ser Gly Lys Ser Ser Leu Leu Ser Ala Ile Leu Glu
225 230 235 240
Glu Met His Leu Leu Glu Gly Ser Val Gly Val Gln Gly Ser Leu Ala
245 250 255
Tyr Val Pro Gln Gln Ala Trp Ile Val Ser Gly Asn Ile Arg Glu Asn

260	265	270
Ile Leu Met Gly Gly Ala Tyr Asp Lys Ala Arg Tyr	Leu Gln Val	Leu
275	280	285
His Cys Cys Ser Leu Asn Arg Asp Leu Glu	Leu Leu Pro	Phe Gly Asp
290	295	300
Met Thr Glu Ile Gly Glu Arg Gly Leu Asn	Leu Ser Gly	Gly Gln Lys
305	310	315
Gln Arg Ile Ser Leu Ala Arg Ala Val	Tyr Ser Asp Arg	Gln Ile Tyr
325	330	335
Leu Leu Asp Asp Pro Leu Ser Ala Val Asp	Ala His Val	Gly Lys His
340	345	350
Ile Phe Glu Glu Cys Ile Lys Lys	Thr Leu Arg	Gly Lys Thr Val Val
355	360	365
Leu Val Thr His Gln Leu Gln	Tyr Leu Glu Phe	Cys Gly Gln Ile Ile
370	375	380
Leu Leu Glu Asn Gly Lys Ile Cys Glu Asn	Gly Thr His Ser	Glu Leu
385	390	395
Met Gln Lys Lys Gly Lys Tyr Ala Gln	Leu Ile Gln Lys	Met His Lys
405	410	415
Glu Ala Thr Ser Val Phe Arg Cys Pro	Met Ser Phe	Phe Asp Thr Ile
420	425	430
Pro Ile Gly Arg Leu Leu Asn Cys Phe	Ala Gly Asp	Leu Glu Gln Leu
435	440	445
Asp Gln Leu Leu Pro Ile Phe Ser	Glu Gln Phe	Leu Val Leu Ser Leu
450	455	460
Met Val Ile Ala Val Leu Leu Ile Val	Ser Val Leu Ser	Pro Tyr Ile
465	470	475
Leu Leu Met Gly Ala Ile Ile Met Val	Ile Cys Phe	Ile Tyr Tyr Met
485	490	495
Met Phe Lys Lys Ala Ile Gly Val Phe	Lys Arg Leu Glu Asn	Tyr Ser
500	505	510
Arg Ser Pro Leu Phe Ser His Ile Leu Asn	Ser Leu Gln	Gly Leu Ser
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Ser Ile His Val Tyr Gly Lys Thr Glu Asp	Phe Ile Ser	Gln
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<210> 11
 <211> 2700
 <212> DNA
 <213> homo sapiens

<400> 11

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gaccacatcc tggatatggg caatgggaag gtggtagaat ttgatggcc ggaggtactg	2640
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<211> 900
<212> PRT
<213> homo sapiens

<400> 12

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20	25	30	
Ile Lys Met Tyr Thr Trp Glu Lys Pro Phe Ala Lys Ile Ile Glu Asp			
35	40	45	
Leu Arg Arg Lys Glu Arg Lys Leu Leu Glu Lys Cys Gly Leu Val Gln			
50	55	60	
Ser Leu Thr Ser Ile Thr Leu Phe Ile Ile Pro Thr Val Ala Thr Ala			
65	70	75	80
Val Trp Val Leu Ile His Thr Ser Leu Lys Leu Lys Leu Thr Ala Ser			
85	90	95	
Met Ala Phe Ser Met Leu Ala Ser Leu Asn Leu Leu Arg Leu Ser Val			
100	105	110	
Phe Phe Val Pro Ile Ala Val Lys Gly Leu Thr Asn Ser Lys Ser Ala			
115	120	125	
Val Met Arg Phe Lys Lys Phe Phe Leu Gln Glu Ser Pro Val Phe Tyr			
130	135	140	

Val Gln Thr Leu Gln Asp Pro Ser Lys Ala Leu Val Phe Glu Glu Ala
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 Thr Leu Ser Trp Gln Gln Thr Cys Pro Gly Ile Val Asn Gly Ala Leu
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 Glu Leu Glu Arg Asn Gly His Ala Ser Glu Gly Met Thr Arg Pro Arg
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 Asp Ala Leu Gly Pro Glu Glu Gly Asn Ser Leu Gly Pro Glu Leu
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 His Lys Ile Asn Leu Val Val Ser Lys Gly Met Met Leu Gly Val Cys
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 Gly Asn Thr Gly Ser Gly Lys Ser Ser Leu Leu Ser Ala Ile Leu Glu
 225 230 235 240
 Glu Met His Leu Leu Glu Gly Ser Val Gly Val Gln Gly Ser Leu Ala
 245 250 255
 Tyr Val Pro Gln Gln Ala Trp Ile Val Ser Gly Asn Ile Arg Glu Asn
 260 265 270
 Ile Leu Met Gly Gly Ala Tyr Asp Lys Ala Arg Tyr Leu Gln Val Leu
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 His Cys Cys Ser Leu Asn Arg Asp Leu Glu Leu Leu Pro Phe Gly Asp
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 Met Thr Glu Ile Gly Glu Arg Gly Leu Asn Leu Ser Gly Gly Gln Lys
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 Gln Arg Ile Ser Leu Ala Arg Ala Val Tyr Ser Asp Arg Gln Ile Tyr
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 Ile Phe Glu Glu Cys Ile Lys Lys Thr Leu Arg Gly Lys Thr Val Val
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 Met Val Ile Ala Val Leu Leu Ile Val Ser Val Leu Ser Pro Tyr Ile
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 Ser Ile His Val Tyr Gly Lys Thr Glu Asp Phe Ile Ser Gln Phe Lys
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Ser Phe Lys Val Met Ala Val Asn Ile Val Leu Gln Leu Ala Ser Ser
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 Phe Gln Åla Thr Ala Arg Ile Gly Leu Glu Thr Glu Ala Gln Phe Thr
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 Ala Val Glu Arg Ile Leu Gln Tyr Met Lys Met Cys Val Ser Glu Ala
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 Gly Glu Ile Ile Phe Gln Asp Tyr His Met Lys Tyr Arg Asp Asn Thr
 660 665 670
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 675 680 685
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 690 695 700
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 Gly Val Asp Ile Cys Ser Ile Gly Leu Glu Asp Leu Arg Ser Lys Leu
 725 730 735
 Ser Val Ile Pro Gln Asp Pro Val Leu Leu Ser Gly Thr Ile Arg Phe
 740 745 750
 Asn Leu Asp Pro Phe Asp Arg His Thr Asp Gln Gln Ile Trp Asp Ala
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 Leu Glu Arg Thr Phe Leu Thr Lys Ala Ile Ser Lys Phe Pro Lys Lys
 770 775 780
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 Ile Leu Ile Asp Glu Ala Thr Ala Ser Ile Asp Met Glu Thr Asp Thr
 820 825 830
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 <212> DNA
 <213> homo sapiens

<400> 13

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cctgggggg	agccccctgg	caatgctggc	ctgttctcc	acctcaccgt	gtcatggctc	300
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 <211> 975
 <212> PRT
 <213> homo sapiens

<400> 14

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Val															
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Val	Asn	Arg	Gly	Ile	Asp	Ile	Gly	Asp	Asp	Met	Val	Ser	Gly	Leu	Ile
	20							25						30	
Tyr	Lys	Thr	Tyr	Thr	Leu	Gln	Asp	Gly	Pro	Trp	Ser	Gln	Gln	Glu	Arg
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Asn	Pro	Glu	Ala	Pro	Gly	Arg	Ala	Ala	Val	Pro	Pro	Trp	Gly	Lys	Tyr
	50							55						60	
Asp	Ala	Ala	Leu	Arg	Thr	Met	Ile	Pro	Phe	Arg	Pro	Lys	Pro	Arg	Phe

65	70	75	80
Pro	Ala	Pro	Gln
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Leu	Thr	Pro	Leu
100		105	110
Met	Ile	Gln	Ser
115		120	125
Leu	Thr	Pro	Leu
130		135	140
Ser	Val	His	Asp
145		150	155
Asp	Ala	Leu	Gly
165		170	175
Arg	Ile	Phe	Asp
180		185	190
Leu	Gly	Ala	Ser
195		200	205
Val	Asn	Leu	Val
210		215	220
His	Gly	Gly	Leu
225		230	235
Gly	Ile	Phe	Cys
245		250	255
Leu	Gly	Asn	Leu
260		265	270
Ile	Asn	Val	Phe
275		280	285
Ser	Ile	Leu	Gly
290		295	300
Thr	Ile	Ile	Tyr
305		310	315
Arg	Ala	Gly	Asp
325		330	335
Thr	Ala	Leu	Val
340		345	350
Ser	Val	Phe	Glu
355		360	365
Thr	Trp	Lys	Pro
370		375	380
Ile	Glu	Leu	Phe
385		390	395
Leu	Arg	Leu	Asn
405		410	415
Thr	Ile	Leu	Leu
420		425	430
Ser	Ala	Asn	Leu
435		440	445
Leu	Val	Leu	Gly
450		455	460
Gly	Lys	Phe	Leu
465		470	475
Leu	Lys	Asp	Pro
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Thr	Gln	Pro	Ser
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Arg	Gly	Gly	Asn
Asn	His	Ala	Ser
Pro	Gly	Glu	Gly
Pro	Glu	Glu	Asn
			Asn
			Ile
			Asn

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Leu Glu Gly Ser Val Gly Val Gln Gly	Ser Leu Ala Tyr Val Pro	Gln
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Leu Ala Arg Ala Val Tyr Ser Asp Arg	Gln Ile Tyr Leu Leu Asp	Asp
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Pro Leu Ser Ala Val Asp Ala His	Val Gly Lys His Ile Phe	Glu
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Cys Ile Lys Lys Thr Leu Arg Gly	Lys Thr Val Val Leu Val	Thr His
675	680	685
Gln Leu Gln Tyr Leu Glu Phe	Cys Gly Gln Ile Leu Leu Glu	Asn
690	695	700
Gly Lys Ile Cys Glu Asn Gly	Thr His Ser Glu Leu Met	Gln Lys
705	710	715
Gly Lys Tyr Ala Gln Leu Ile Gln Lys	Met His Lys Glu Ala	Thr Ser
725	730	735
Asp Met Leu Gln Asp Thr Ala Lys	Ile Ala Glu Lys Pro Lys	Val Glu
740	745	750
Ser Gln Ala Leu Ala Thr Ser	Leu Glu Glu Ser Leu Asn	Gly Asn Ala
755	760	765
Val Pro Glu His Gln Leu Thr	Gln Glu Glu Glu Met Glu	Glu Gly Ser
770	775	780
Leu Ser Trp Arg Val Tyr His	Tyr Ile Gln Ala Ala Gly	Gly Tyr
785	790	795
Met Val Ser Cys Ile Ile Phe	Phe Phe Val Val Leu Ile	Val Phe Leu
805	810	815
Thr Ile Phe Ser Phe Trp Trp	Leu Ser Tyr Trp Leu Glu	Gln Gly Ser
820	825	830
Gly Thr Asn Ser Ser Arg	Glu Ser Asn Gly Thr Met	Ala Asp Leu Gly
835	840	845
Asn Ile Ala Asp Asn Pro	Gln Leu Ser Phe Tyr	Gln Leu Val Tyr Gly
850	855	860
Leu Asn Ala Leu Leu Ile	Cys Val Gly Val Cys	Ser Ser Gly Ile
865	870	875
Phe Thr Lys Val Thr Arg	Lys Ala Ser Thr Ala Leu	His Asn Lys Leu
885	890	895
Phe Asn Lys Val Phe Arg	Cys Pro Met Ser Phe	Phe Asp Thr Ile Pro
900	905	910
Ile Gly Arg Leu Leu Asn Cys	Phe Ala Gly Asp Leu Glu	Gln Leu Asp
915	920	925
Gln Leu Leu Pro Ile Phe Ser	Glu Gln Phe Leu Val	Leu Ser Leu Met
930	935	940
Val Ile Ala Val Leu Leu Ile	Val Ser Val Leu Ser Pro	Tyr Ile Leu
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<212> DNA
<213> homo sapiens

<400> 15

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aggat	cagcc	tg	ggcc	ctca	tct	ctgggg	1980
ctgt	tctgc	tg	ccc	tatt	tc	ccat	2040
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cagat	catt	tg	ttggaaaa	tgg	aaaat	tg	2160
caga	aaaagg	gg	aaatatgc	cca	actt	ttat	2220
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ac	cc	cc	gggtct	ca	ac	ggctct	2340
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ggagg	ttaca	tg	gttctt	ca	act	ccaggc	2460
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ttc	ctt	tg	gttctt	tc	tc	tc	2880

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<400> 16

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65 70 75 80	
Pro Ala Pro Gln Pro Leu Gly Leu Phe Ser Tyr Leu Thr Val Ser Trp	
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Leu Thr Pro Leu Met Ile Gln Ser Leu Arg Ser Arg Leu Asp Glu Asn	
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Thr Ile Pro Pro Leu Ser Val His Asp Ala Ser Asp Lys Asn Val Gln	
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130 135 140	
Lys Ala Ser Val Leu Leu Val Met Leu Arg Phe Gln Arg Thr Arg Leu	
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Ile Phe Asp Ala Leu Leu Gly Ile Cys Phe Cys Ile Ala Ser Val Leu	
165 170 175	
Gly Pro Ile Leu Ile Ile Pro Lys Ile Leu Glu Tyr Ser Glu Glu Gln	
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Leu Gly Asn Val Val His Gly Val Gly Leu Cys Phe Ala Leu Phe Leu	
195 200 205	
Ser Glu Cys Val Lys Ser Leu Ser Phe Ser Ser Ser Trp Ile Ile Asn	
210 215 220	
Gln Arg Thr Ala Ile Arg Phe Gln Ala Ala Val Ser Ser Phe Ala Phe	
225 230 235 240	
Glu Lys Leu Ile Gln Phe Lys Ser Val Ile His Ile Thr Ser Gly Glu	
245 250 255	
Ala Ile Ser Phe Phe Thr Gly Asp Val Asn Tyr Leu Phe Glu Gly Val	
260 265 270	
Cys Tyr Gly Pro Leu Val Leu Ile Thr Cys Ala Ser Leu Val Ile Cys	
275 280 285	
Ser Ile Ser Ser Tyr Phe Ile Ile Gly Tyr Thr Ala Phe Ile Ala Ile	
290 295 300	
Leu Cys Tyr Leu Leu Val Phe Pro Leu Glu Val Phe Met Thr Arg Met	
305 310 315 320	
Ala Val Lys Ala Gln His His Thr Ser Glu Val Ser Asp Gln Arg Ile	
325 330 335	
Arg Val Thr Ser Glu Val Leu Thr Cys Ile Lys Leu Ile Lys Met Tyr	
340 345 350	
Thr Trp Glu Lys Pro Phe Ala Lys Ile Ile Glu Asp Leu Arg Arg Lys	

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Glu Arg Lys Leu Leu Glu	Lys Cys Gly Leu Val Gln	Ser Leu Thr Ser
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405	410	415
Met Leu Ala Ser Leu Asn Leu Leu Arg	Leu Ser Val Phe	Phe Val Pro
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Lys Lys Phe Phe Leu Gln Glu Ser Pro Val	Phe Tyr Val Gln Thr Leu	
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Gln Asp Pro Ser Lys Ala Leu Val Phe	Glu Ala Thr Leu Ser Trp	
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Asn Gly His Ala Ser Glu Gly Met Thr Arg	Pro Arg Asp Ala Leu Gly	
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Gln Ala Trp Ile Val Ser Gly Asn Ile Arg	Glu Asn Ile Leu Met Gly	
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Gly Ala Tyr Asp Lys Ala Arg Tyr Leu Gln	Val Leu His Cys Cys Ser	
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Pro Leu Ser Ala Val Asp Ala His Val	Gly Lys His Ile Phe Glu Glu	
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Cys Ile Lys Lys Thr Leu Arg Gly	Lys Thr Val Val Leu Val Thr His	
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755	760	765
Val Pro Glu His Gln Leu Thr Gln Glu	Glu Glu Met Glu Glu Gly Ser	
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Leu Ser Trp Arg Val Tyr His His Tyr	Ile Gln Ala Ala Gly Gly Tyr	
785	790	795
Met Val Ser Cys Ile Ile Phe Phe Val	Val Leu Ile Val Phe Leu	800

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Phe Thr Lys Val Thr Arg Lys Ala Ser Thr Ala Leu His Asn Lys Leu		
885	890	895
Phe Asn Lys Val Phe Arg Cys Pro Met Ser Phe Phe Asp Thr Ile Pro		
900	905	910
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Gln Leu Leu Pro Ile Phe Ser Glu Gln Phe Leu Val Leu Ser Leu Met		
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Val Ile Ala Val Leu Leu Ile Val Ser Val Leu Ser Pro Tyr Ile Leu		
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Tyr Lys Thr Tyr Thr Leu Gln Asp Gly Pro Trp Ser Gln Gln Glu Arg			
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Pro Ala Pro Gln Pro Leu Gly Leu Phe Ser Tyr Leu Thr Val Ser Trp			
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Ile Phe Asp Ala Leu Leu Gly Ile Cys Phe Cys Ile Ala Ser Val Leu			
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Leu Gly Asn Val Val His Gly Val Gly Leu Cys Phe Ala Leu Phe Leu			
195	200	205	
Ser Glu Cys Val Lys Ser Leu Ser Phe Ser Ser Ser Trp Ile Ile Asn			
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Cys Tyr Gly Pro Leu Val Leu Ile Thr Cys Ala Ser Leu Val Ile Cys			
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Gly Ala Tyr Asp Lys Ala Arg Tyr Leu Gln Val Leu His Cys Cys Ser		
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Leu Asn Arg Asp Leu Glu Leu Leu Pro Phe Gly Asp Met Thr Glu Ile		
610	615	620
Gly Glu Arg Gly Leu Asn Leu Ser Gly Gly Gln Lys Gln Arg Ile Ser		
625	630	635
640		
Leu Ala Arg Ala Val Tyr Ser Asp Arg Gln Ile Tyr Leu Leu Asp Asp		
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Cys Ile Lys Lys Thr Leu Arg Gly Lys Thr Val Val Leu Val Thr His		
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Gly Lys Ile Cys Glu Asn Gly Thr His Ser Glu Leu Met Gln Lys Lys		
705	710	715
720		
Gly Lys Tyr Ala Gln Leu Ile Gln Lys Met His Lys Glu Ala Thr Ser		
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Ser Gln Ala Leu Ala Thr Ser Leu Glu Glu Ser Leu Asn Gly Asn Ala		
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Val Pro Glu His Gln Leu Thr Gln Glu Glu Glu Met Glu Glu Gly Ser		
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Thr Ile Phe Ser Phe Trp Trp Leu Ser Tyr Trp Leu Glu Gln Gly Ser		
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Leu His Met Glu Gly Thr Ser Cys Pro Gln Gly Trp Pro Gln His Gly		
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Glu Arg Thr Phe Leu Thr Lys Ala Ile Ser Lys Phe Pro Lys Lys Leu		
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35 40 45
Asn Pro Glu Ala Pro Gly Arg Ala Ala Val Pro Pro Trp Gly Lys Tyr
50 55 60
Asp Ala Ala Leu Arg Thr Met Ile Pro Phe Arg Pro Lys Pro Arg Phe
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Pro Ala Pro Gln Pro Leu Gly Leu Phe Ser Tyr Leu Thr Val Ser Trp
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Ile Phe Asp Ala Leu Leu Gly Ile Cys Phe Cys Ile Ala Ser Val Leu
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Gly Pro Ile Leu Ile Ile Pro Lys Ile Leu Glu Tyr Ser Glu Glu Gln
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Leu Gly Asn Val Val His Gly Val Gly Leu Cys Phe Ala Leu Phe Leu
195 200 205
Ser Glu Cys Val Lys Ser Leu Ser Phe Ser Ser Ser Trp Ile Ile Asn
210 215 220
Gln Arg Thr Ala Ile Arg Phe Gln Ala Ala Val Ser Ser Phe Ala Phe
225 230 235 240
Glu Lys Leu Ile Gln Phe Lys Ser Val Ile His Ile Thr Ser Gly Glu
245 250 255
Ala Ile Ser Phe Phe Thr Gly Asp Val Asn Tyr Leu Phe Glu Gly Val
260 265 270
Cys Tyr Gly Pro Leu Val Leu Ile Thr Cys Ala Ser Leu Val Ile Cys
275 280 285
Ser Ile Ser Ser Tyr Phe Ile Ile Gly Tyr Thr Ala Phe Ile Ala Ile
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Leu Cys Tyr Leu Leu Val Phe Pro Leu Glu Val Phe Met Thr Arg Met
305 310 315 320
Ala Val Lys Ala Gln His His Thr Ser Glu Val Ser Asp Gln Arg Ile
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Arg Val Thr Ser Glu Val Leu Thr Cys Ile Lys Leu Ile Lys Met Tyr
340 345 350
Thr Trp Glu Lys Pro Phe Ala Lys Ile Ile Glu Asp Leu Arg Arg Lys
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Glu Arg Lys Leu Leu Glu Lys Cys Gly Leu Val Gln Ser Leu Thr Ser
370 375 380
Ile Thr Leu Phe Ile Ile Pro Thr Val Ala Thr Ala Val Trp Val Leu
385 390 395 400
Ile His Thr Ser Leu Lys Leu Lys Leu Thr Ala Ser Met Ala Phe Ser
405 410 415

Met Leu Ala Ser Leu Asn Leu Leu Arg Leu Ser Val Phe Phe Val Pro
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 Ile Ala Val Lys Gly Leu Thr Asn Ser Lys Ser Ala Val Met Arg Phe
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 Lys Lys Phe Phe Leu Gln Glu Ser Pro Val Phe Tyr Val Gln Thr Leu
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 Gln Asp Pro Ser Lys Ala Leu Val Phe Glu Glu Ala Thr Leu Ser Trp
 465 470 475 480
 Gln Gln Thr Cys Pro Gly Ile Val Asn Gly Ala Leu Glu Leu Glu Arg
 485 490 495
 Asn Gly His Ala Ser Glu Gly Met Thr Arg Pro Arg Asp Ala Leu Gly
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 Pro Glu Glu Glu Gly Asn Ser Leu Gly Pro Glu Leu His Lys Ile Asn
 515 520 525
 Leu Val Val Ser Lys Gly Met Met Leu Gly Val Cys Gly Asn Thr Gly
 530 535 540
 Ser Gly Lys Ser Ser Leu Leu Ser Ala Ile Leu Glu Glu Met His Leu
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 Leu Glu Gly Ser Val Gly Val Gln Gly Ser Leu Ala Tyr Val Pro Gln
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 Gln Ala Trp Ile Val Ser Gly Asn Ile Arg Glu Asn Ile Leu Met Gly
 580 585 590
 Gly Ala Tyr Asp Lys Ala Arg Tyr Leu Gln Val Leu His Cys Cys Ser
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 Leu Asn Arg Asp Leu Glu Leu Leu Pro Phe Gly Asp Met Thr Glu Ile
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 Gly Glu Arg Gly Leu Asn Leu Ser Gly Gly Gln Lys Gln Arg Ile Ser
 625 630 635 640
 Leu Ala Arg Ala Val Tyr Ser Asp Arg Gln Ile Tyr Leu Leu Asp Asp
 645 650 655
 Pro Leu Ser Ala Val Asp Ala His Val Gly Lys His Ile Phe Glu Glu
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 Cys Ile Lys Lys Thr Leu Arg Gly Lys Thr Val Val Leu Val Thr His
 675 680 685
 Gln Leu Gln Tyr Leu Glu Phe Cys Gly Gln Ile Ile Leu Leu Glu Asn
 690 695 700
 Gly Lys Ile Cys Glu Asn Gly Thr His Ser Glu Leu Met Gln Lys Lys
 705 710 715 720
 Gly Lys Tyr Ala Gln Leu Ile Gln Lys Met His Lys Glu Ala Thr Ser
 725 730 735
 Val Phe Arg Cys Pro Met Ser Phe Phe Asp Thr Ile Pro Ile Gly Arg
 740 745 750
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 755 760 765
 Pro Ile Phe Ser Glu Gln Phe Leu Val Leu Ser Leu Met Val Ile Ala
 770 775 780
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 <211> 2586
 <212> DNA
 <213> homo sapiens

<400> 21

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cagtga	2586

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<211> 858

<212> PRT

<213> homo sapiens

<400> 22

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20	25	30	

Tyr Lys Thr Tyr Thr Leu Gln Asp Gly Pro Trp Ser Gln Gln Glu Arg
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 Asn Pro Glu Ala Pro Gly Arg Ala Ala Val Pro Pro Trp Gly Lys Tyr
 50 55 60
 Asp Ala Ala Leu Arg Thr Met Ile Pro Phe Arg Pro Lys Pro Arg Phe
 65 70 75 80
 Pro Ala Pro Gln Pro Leu Gly Leu Phe Ser Tyr Leu Thr Val Ser Trp
 85 90 95
 Leu Thr Pro Leu Met Ile Gln Ser Leu Arg Ser Arg Leu Asp Glu Asn
 100 105 110
 Thr Ile Pro Pro Leu Ser Val His Asp Ala Ser Asp Lys Asn Val Gln
 115 120 125
 Arg Leu His Arg Leu Trp Glu Glu Glu Val Ser Arg Arg Gly Ile Glu
 130 135 140
 Lys Ala Ser Val Leu Leu Val Met Leu Arg Phe Gln Arg Thr Arg Leu
 145 150 155 160
 Ile Phe Asp Ala Leu Leu Gly Ile Cys Phe Cys Ile Ala Ser Val Leu
 165 170 175
 Gly Pro Ile Leu Ile Ile Pro Lys Ile Leu Glu Tyr Ser Glu Glu Gln
 180 185 190
 Leu Gly Asn Val Val His Gly Val Gly Leu Cys Phe Ala Leu Phe Leu
 195 200 205
 Ser Glu Cys Val Lys Ser Leu Ser Phe Ser Ser Ser Trp Ile Ile Asn
 210 215 220
 Gln Arg Thr Ala Ile Arg Phe Gln Ala Ala Val Ser Ser Phe Ala Phe
 225 230 235 240
 Glu Lys Leu Ile Gln Phe Lys Ser Val Ile His Ile Thr Ser Gly Glu
 245 250 255
 Ala Ile Ser Phe Phe Thr Gly Asp Val Asn Tyr Leu Phe Glu Gly Val
 260 265 270
 Cys Tyr Gly Pro Leu Val Leu Ile Thr Cys Ala Ser Leu Val Ile Cys
 275 280 285
 Ser Ile Ser Ser Tyr Phe Ile Ile Gly Tyr Thr Ala Phe Ile Ala Ile
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 Leu Cys Tyr Leu Leu Val Phe Pro Leu Glu Val Phe Met Thr Arg Met
 305 310 315 320
 Ala Val Lys Ala Gln His His Thr Ser Glu Val Ser Asp Gln Arg Ile
 325 330 335
 Arg Val Thr Ser Glu Val Leu Thr Cys Ile Lys Leu Ile Lys Met Tyr
 340 345 350
 Thr Trp Glu Lys Pro Phe Ala Lys Ile Ile Glu Asp Leu Arg Arg Lys
 355 360 365
 Glu Arg Lys Leu Leu Glu Lys Cys Gly Leu Val Gln Ser Leu Thr Ser
 370 375 380
 Ile Thr Leu Phe Ile Ile Pro Thr Val Ala Thr Ala Val Trp Val Leu
 385 390 395 400
 Ile His Thr Ser Leu Lys Leu Lys Leu Thr Ala Ser Met Ala Phe Ser
 405 410 415
 Met Leu Ala Ser Leu Asn Leu Leu Arg Leu Ser Val Phe Phe Val Pro
 420 425 430
 Ile Ala Val Lys Gly Leu Thr Asn Ser Lys Ser Ala Val Met Arg Phe
 435 440 445
 Lys Lys Phe Phe Leu Gln Glu Ser Pro Val Phe Tyr Val Gln Thr Leu
 450 455 460
 Gln Asp Pro Ser Lys Ala Leu Val Phe Glu Glu Ala Thr Leu Ser Trp
 465 470 475 480

Gln Gln Thr Cys Pro Gly Ile Val Asn Gly Ala Leu Glu Leu Glu Arg
 485 490 495
 Asn Gly His Ala Ser Glu Gly Met Thr Arg Pro Arg Asp Ala Leu Gly
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 Pro Glu Glu Glu Gly Asn Ser Leu Gly Pro Glu Leu His Lys Ile Asn
 515 520 525
 Leu Val Val Ser Lys Gly Met Met Leu Gly Val Cys Gly Asn Thr Gly
 530 535 540
 Ser Gly Lys Ser Ser Leu Leu Ser Ala Ile Leu Glu Glu Met His Leu
 545 550 560
 Leu Glu Gly Ser Val Gly Val Gln Gly Ser Leu Ala Tyr Val Pro Gln
 565 570 575
 Gln Ala Trp Ile Val Ser Gly Asn Ile Arg Glu Asn Ile Leu Met Gly
 580 585 590
 Gly Ala Tyr Asp Lys Ala Arg Tyr Leu Gln Val Leu His Cys Cys Ser
 595 600 605
 Leu Asn Arg Asp Leu Glu Leu Leu Pro Phe Gly Asp Met Thr Glu Ile
 610 615 620
 Gly Glu Arg Gly Leu Asn Leu Ser Gly Gly Gln Lys Gln Arg Ile Ser
 625 630 635 640
 Leu Ala Arg Ala Val Tyr Ser Asp Arg Gln Ile Tyr Leu Leu Asp Asp
 645 650 655
 Pro Leu Ser Ala Val Asp Ala His Val Gly Lys His Ile Phe Glu Glu
 660 665 670
 Cys Ile Lys Lys Thr Leu Arg Gly Lys Thr Val Val Leu Val Thr His
 675 680 685
 Gln Leu Gln Tyr Leu Glu Phe Cys Gly Gln Ile Ile Leu Leu Glu Asn
 690 695 700
 Gly Lys Ile Cys Glu Asn Gly Thr His Ser Glu Leu Met Gln Lys Lys
 705 710 715 720
 Gly Lys Tyr Ala Gln Leu Ile Gln Lys Met His Lys Glu Ala Thr Ser
 725 730 735
 Val Phe Arg Cys Pro Met Ser Phe Phe Asp Thr Ile Pro Ile Gly Arg
 740 745 750
 Leu Leu Asn Cys Phe Ala Gly Asp Leu Glu Gln Leu Asp Gln Leu Leu
 755 760 765
 Pro Ile Phe Ser Glu Gln Phe Leu Val Leu Ser Leu Met Val Ile Ala
 770 775 780
 Val Leu Leu Ile Val Ser Val Leu Ser Pro Tyr Ile Leu Leu Met Gly
 785 790 795 800
 Ala Ile Ile Met Val Ile Cys Phe Ile Tyr Tyr Met Met Phe Lys Lys
 805 810 815
 Ala Ile Gly Val Phe Lys Arg Leu Glu Asn Tyr Ser Arg Ser Pro Leu
 820 825 830
 Phe Ser His Ile Leu Asn Ser Leu Gln Gly Leu Ser Ser Ile His Val
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 <211> 3660
 <212> DNA
 <213> homo sapiens

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<212> PRT
<213> homo sapiens

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Tyr Lys Thr Tyr Thr Leu Gln Asp Gly Pro Trp Ser Gln Gln Glu Arg						
35	40	45				
Asn Pro Glu Ala Pro Gly Arg Ala Ala Val Pro Pro Trp Gly Lys Tyr						
50	55	60				
Asp Ala Ala Leu Arg Thr Met Ile Pro Phe Arg Pro Lys Pro Arg Phe						
65	70	75	80			
Pro Ala Pro Gln Pro Leu Gly Leu Phe Ser Tyr Leu Thr Val Ser Trp						
85	90	95				
Leu Thr Pro Leu Met Ile Gln Ser Leu Arg Ser Arg Leu Asp Glu Asn						
100	105	110				
Thr Ile Pro Pro Leu Ser Val His Asp Ala Ser Asp Lys Asn Val Gln						
115	120	125				
Arg Leu His Arg Leu Trp Glu Glu Val Ser Arg Arg Gly Ile Glu						
130	135	140				
Lys Ala Ser Val Leu Leu Val Met Leu Arg Phe Gln Arg Thr Arg Leu						
145	150	155	160			
Ile Phe Asp Ala Leu Leu Gly Ile Cys Phe Cys Ile Ala Ser Val Leu						
165	170	175				
Gly Pro Ile Leu Ile Ile Pro Lys Ile Leu Glu Tyr Ser Glu Glu Gln						
180	185	190				
Leu Gly Asn Val Val His Gly Val Gly Leu Cys Phe Ala Leu Phe Leu						
195	200	205				
Ser Glu Cys Val Lys Ser Leu Ser Phe Ser Ser Ser Trp Ile Ile Asn						
210	215	220				
Gln Arg Thr Ala Ile Arg Phe Gln Ala Ala Val Ser Ser Phe Ala Phe						
225	230	235	240			
Glu Lys Leu Ile Gln Phe Lys Ser Val Ile His Ile Thr Ser Gly Glu						
245	250	255				
Ala Ile Ser Phe Phe Thr Gly Asp Val Asn Tyr Leu Phe Glu Gly Val						
260	265	270				
Cys Tyr Gly Pro Leu Val Leu Ile Thr Cys Ala Ser Leu Val Ile Cys						
275	280	285				
Ser Ile Ser Ser Tyr Phe Ile Ile Gly Tyr Thr Ala Phe Ile Ala Ile						
290	295	300				
Leu Cys Tyr Leu Leu Val Phe Pro Leu Glu Val Phe Met Thr Arg Met						
305	310	315	320			
Ala Val Lys Ala Gln His His Thr Ser Glu Val Ser Asp Gln Arg Ile						
325	330	335				
Arg Val Thr Ser Glu Val Leu Thr Cys Ile Lys Leu Ile Lys Met Tyr						
340	345	350				
Thr Trp Glu Lys Pro Phe Ala Lys Ile Ile Glu Asp Leu Arg Arg Lys						

355	360	365
Glu Arg Lys Leu Leu Glu Lys Cys Gly Leu Val Gln Ser	Leu Thr Ser	
370	375	380
Ile Thr Leu Phe Ile Ile Pro Thr Val Ala Thr Ala Val Trp	Val Leu	
385	390	395
Ile His Thr Ser Leu Lys Leu Lys Leu Thr Ala Ser Met Ala	Phe Ser	
405	410	415
Met Leu Ala Ser Leu Asn Leu Leu Arg Leu Ser Val Phe	Phe Val Pro	
420	425	430
Ile Ala Val Lys Gly Leu Thr Asn Ser Lys Ser Ala Val Met	Arg Phe	
435	440	445
Lys Lys Phe Phe Leu Gln Glu Ser Pro Val Phe Tyr Val Gln	Thr Leu	
450	455	460
Gln Asp Pro Ser Lys Ala Leu Val Phe Glu Glu Ala Thr	Leu Ser Trp	
465	470	475
Gln Gln Thr Cys Pro Gly Ile Val Asn Gly Ala Leu Glu	Leu Glu Arg	
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Asn Gly His Ala Ser Glu Gly Met Thr Arg Pro Arg Asp Ala	Leu Gly	
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Pro Glu Glu Glu Gly Asn Ser Leu Gly Pro Glu Leu His	Lys Ile Asn	
515	520	525
Leu Val Val Ser Lys Gly Met Met Leu Gly Val Cys Gly	Asn Thr Gly	
530	535	540
Ser Gly Lys Ser Ser Leu Leu Ser Ala Ile Leu Glu Glu Met	His Leu	
545	550	555
Leu Glu Gly Ser Val Gly Val Gln Gly Ser Leu Ala Tyr	Val Pro Gln	
565	570	575
Gln Ala Trp Ile Val Ser Gly Asn Ile Arg Glu Asn Ile	Leu Met Gly	
580	585	590
Gly Ala Tyr Asp Lys Ala Arg Tyr Leu Gln Val Leu His	Cys Cys Ser	
595	600	605
Leu Asn Arg Asp Leu Glu Leu Leu Pro Phe Gly Asp Met	Thr Glu Ile	
610	615	620
Gly Glu Arg Gly Leu Asn Leu Ser Gly Gly Gln Lys Gln	Arg Ile Ser	
625	630	635
Leu Ala Arg Ala Val Tyr Ser Asp Arg Gln Ile Tyr Leu	Leu Asp Asp	
645	650	655
Pro Leu Ser Ala Val Asp Ala His Val Gly Lys His Ile	Phe Glu Glu	
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Cys Ile Lys Lys Thr Leu Arg Gly Lys Thr Val Val Leu	Val Thr His	
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Gln Leu Gln Tyr Leu Glu Phe Cys Gly Gln Ile Ile Leu	Leu Glu Asn	
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Gly Lys Ile Cys Glu Asn Gly Thr His Ser Glu Leu Met	Gln Lys Lys	
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Gly Lys Tyr Ala Gln Leu Ile Gln Lys Met His Lys Glu	Ala Thr Ser	
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Val Phe Arg Cys Pro Met Ser Phe Phe Asp Thr Ile Pro	Ile Gly Arg	
740	745	750
Leu Leu Asn Cys Phe Ala Gly Asp Leu Glu Gln Leu Asp	Gln Leu Leu	
755	760	765
Pro Ile Phe Ser Glu Gln Phe Leu Val Leu Ser Leu Met	Val Ile Ala	
770	775	780
Val Leu Leu Ile Val Ser Val Leu Ser Pro Tyr Ile Leu	Leu Met Gly	
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Ala Ile Ile Met Val Ile Cys Phe Ile Tyr Tyr Met Met	Phe Lys Lys	800

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Ala Ile Gly Val Phe Lys Arg Leu Glu Asn Tyr Ser Arg Ser Pro Leu		
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Phe Ser His Ile Leu Asn Ser Leu Gln Gly Leu Ser Ser Ile His Val		
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Tyr Gly Lys Thr Glu Asp Phe Ile Ser Gln Phe Lys Arg Leu Thr Asp		
850	855	860
Ala Gln Asn Asn Tyr Leu Leu Leu Phe Leu Ser Ser Thr Arg Trp Met		
865	870	875
Ala Leu Arg Leu Glu Ile Met Thr Asn Leu Val Thr Leu Ala Val Ala		
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Leu Phe Val Ala Phe Gly Ile Ser Ser Thr Pro Tyr Ser Phe Lys Val		
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Met Ala Val Asn Ile Val Leu Gln Leu Ala Ser Ser Phe Gln Ala Thr		
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Ala Arg Ile Gly Leu Glu Thr Glu Ala Gln Phe Thr Ala Val Glu Arg		
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Ile Leu Gln Tyr Met Lys Met Cys Val Ser Glu Ala Pro Leu His Met		
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Glu Gly Thr Ser Cys Pro Gln Gly Trp Pro Gln His Gly Glu Ile Ile		
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Phe Gln Asp Tyr His Met Lys Tyr Arg Asp Asn Thr Pro Thr Val Leu		
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His Gly Ile Asn Leu Thr Ile Arg Gly His Glu Val Val Gly Ile Val		
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Gln Asp Pro Val Leu Leu Ser Gly Thr Ile Arg Phe Asn Leu Asp Pro		
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Phe Asp Arg His Thr Asp Gln Gln Ile Trp Asp Ala Leu Glu Arg Thr		
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Phe Leu Thr Lys Ala Ile Ser Lys Phe Pro Lys Lys Leu His Thr Asp		
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Val Val Glu Asn Gly Gly Asn Phe Ser Val Gly Glu Arg Gln Leu Leu		
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